



10/002282

C97C

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Transmittal of Certificate of Correction

Docket KOL-10-5563

In re Patent of: Easterday et al

Patent No. US 6,746,546 B2

Issued: June 8, 2004

For: LOW TEMPERATURE NITRIDING SALT AND METHOD OF USE

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Certificate
DEC 15 2004
of Correction

Attention: Decision and Certificate of Correction
Branch of the Patent Issue Division

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT
FOR PATENT OFFICE MISTAKE

Sir:

Previously on July 20, 2004 a Certificate of Correction was filed setting forth the errors for which correction is requested. However, when the Certificate of Correction was issued on November 23, 2004, due to a Patent Office error, the correction was not made. A copy of the Certificate of Correction is attached. Therefore a second request for correction is submitted herewith.

It is requested that a Certificate of Correction be issued with respect to the foregoing patent. In this connection, Form PTO-1050 is attached hereto, in duplicate, and sets forth the errors for which correction is requested.

Since the errors are on the part of the Patent Office, it is believed that there is no charge for this Certificate of Correction. However, Deposit Account No. 500645 is to be charged in the event additional fees are required. The errors relate to the insertion of the numeral "5" in the body of a sentence in the claims, which numeral was actually a line number appearing in the original specification.

Please send the Certificate of Correction to the undersigned.

Respectfully submitted,

CERTIFICATE OF MAILING UNDER 37 CFR 1.8	
I hereby certify that I am depositing the enclosed or attached correspondence with the United States Postal Service as First Class mail in an envelope addressed to Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450	
on <u>December 8, 2004</u>	
<u>Alicia Y. Sterba</u>	
Name of person mailing paper	
<u>Alicia Y. Sterba</u>	<u>12/8/2004</u>
Signature	Date

By:

Date: 12/18/2004

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DEC 29 2004

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,746,546 B2
DATED : June 8, 2004
INVENTOR(S) : Easterday et al.

Page 1 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Please replace the specification with the new attached specification including Figure 1.

Please replace Formal Drawings 1-5 with the attached drawings.



Signed and Sealed this
Twenty-third Day of November, 2004

JON W. DUDAS
Director of the United States Patent and Trademark Office

(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO US 6,746,546 B2

DATED June 8, 2004

INVENTOR(S) James R. Easterday and John F. Pilznienski

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the claims:

Column 7, line 13, after "the", first occurrence, delete the numeral "5".

MAILING ADDRESS OF SENDER:

William N. Hogg
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Docket No. KOL-10-5563

PATENT NO: US 6,746,546 B2

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CERTIFICATE OF CORRECTION

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Please replace Formal Drawings 1-5 with the attached drawings.

Signed and Sealed this

Twenty-third Day of November, 2004

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized, with a large, looped initial "J" and a distinct "D" at the end.

JON W. DUDAS
Director of the United States Patent and Trademark Office

(12) **United States Patent**
Easterday et al.

(10) Patent No.: **US 6,746,546 B2**
(45) Date of Patent: **Jun. 8, 2004**

(54) **LOW TEMPERATURE NITRIDING SALT
AND METHOD OF USE**

GB 1105031 3/1965 C23C/9/14

OTHER PUBLICATIONS

(75) Inventors: James R. Easterday, Bloomfield Hills, MI (US); John F. Pilzinski, Dearborn Heights, MI (US)

"Plasma Nitriding of Stainless Steels at Low Temperatures", B. Larisch et al, Technical University Freiberg, pp. 221-228.

(73) Assignee: Kotene Corporation, Detroit, MI (US)

"The Response of Austenitic Stainless Steels to Low-temperature Plasma Nitriding", Y. Sun et al, Heat Treatment of Metals, 1999, pp. 9-16.

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(h) by 135 days.

"Influence of the Steel Composition and Treating Parameters on the Properties of Nitrocarburized Components", G. Wab 1989.

* cited by examiner

(21) Appl. No.: 10/002,282

(22) Filed: Nov. 2, 2001

Primary Examiner—Andrew L. Oltmans

(65) Prior Publication Data

(74) Attorney, Agent, or Firm—William N. Hogg

US 2003/0084963 A1 May 8, 2003

(57) ABSTRACT

(51) Int. Cl.⁷ C23C 8/26

(52) U.S. Cl. 148/228; 148/229; 148/240;
148/242; 148/274

(58) Field of Search 148/228, 229,
148/240, 242, 274; 252/390

(56) References Cited

U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

EP 1055739 A2 5/2000 C21D/9/50

A composition for nitrocarburizing stainless steel parts and a method for producing a nitride or hard case on such parts using the composition, are provided. The composition includes alkali metal cyanate and alkali metal carbonate, wherein the cyanate ion is present in a weight percentage of greater than 45% and less than 55.2%. The composition is fused and maintained between about 750° F. and about 950° F. depending upon the type of stainless steel to be treated. The workpiece is immersed in the fused bath and left in until a satisfactory compound layer or case is formed. With austenitic stainless steel, the piece is immersed from about four hours to about six hours at temperatures between about 750° F. and about 950° F., preferably between 750° F. and 850° F. to maintain corrosion resistance.

With 400 series stainless steel, increased corrosion resistance is achieved by immersion for between four and six hours at 950° F.

2 Claims, 5 Drawing Sheets

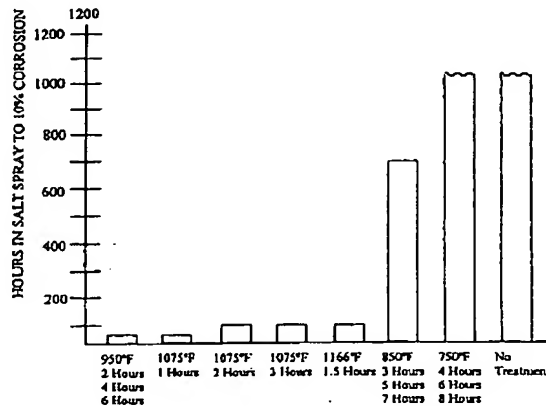


Fig 1

U.S. Patent

Jun. 8, 2004

Sheet 1 of 5

6,746,546 B2

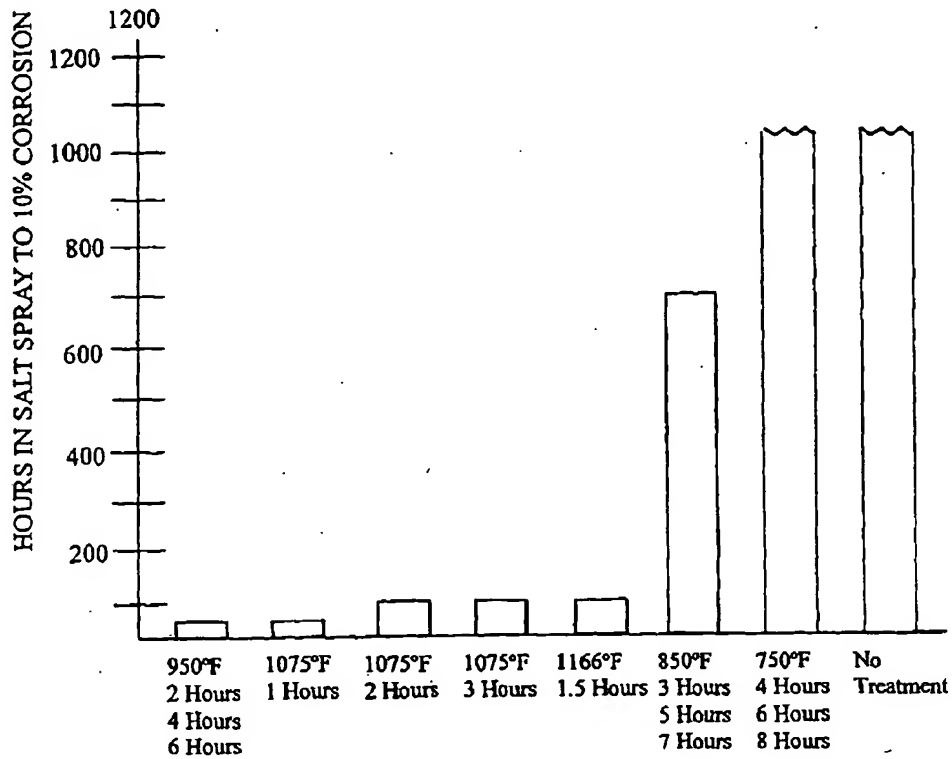


Fig 1

U.S. Patent

Jun. 8, 2004

Sheet 2 of 5

6,746,546 B2

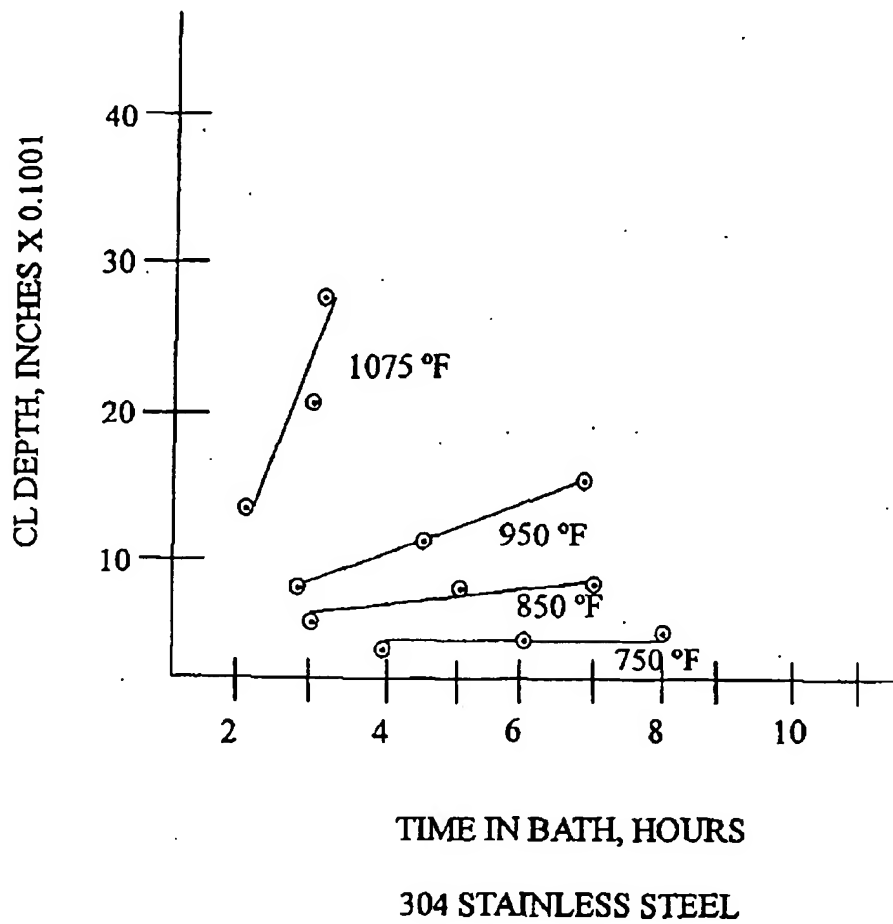


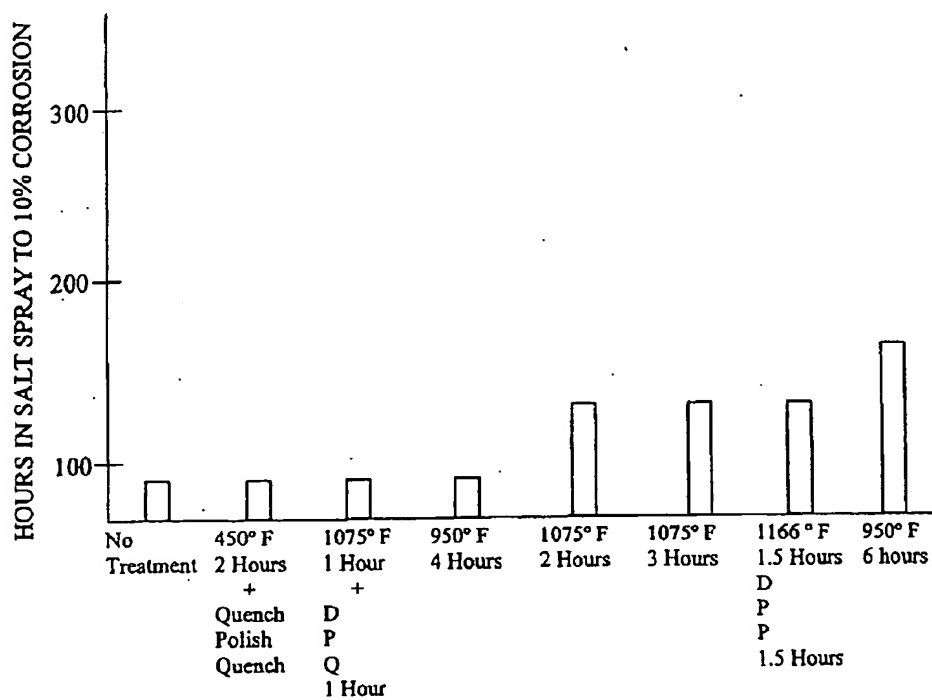
Fig 2

U.S. Patent

Jun. 8, 2004

Sheet 3 of 5

6,746,546 B2



4/6 STAINLESS STEEL

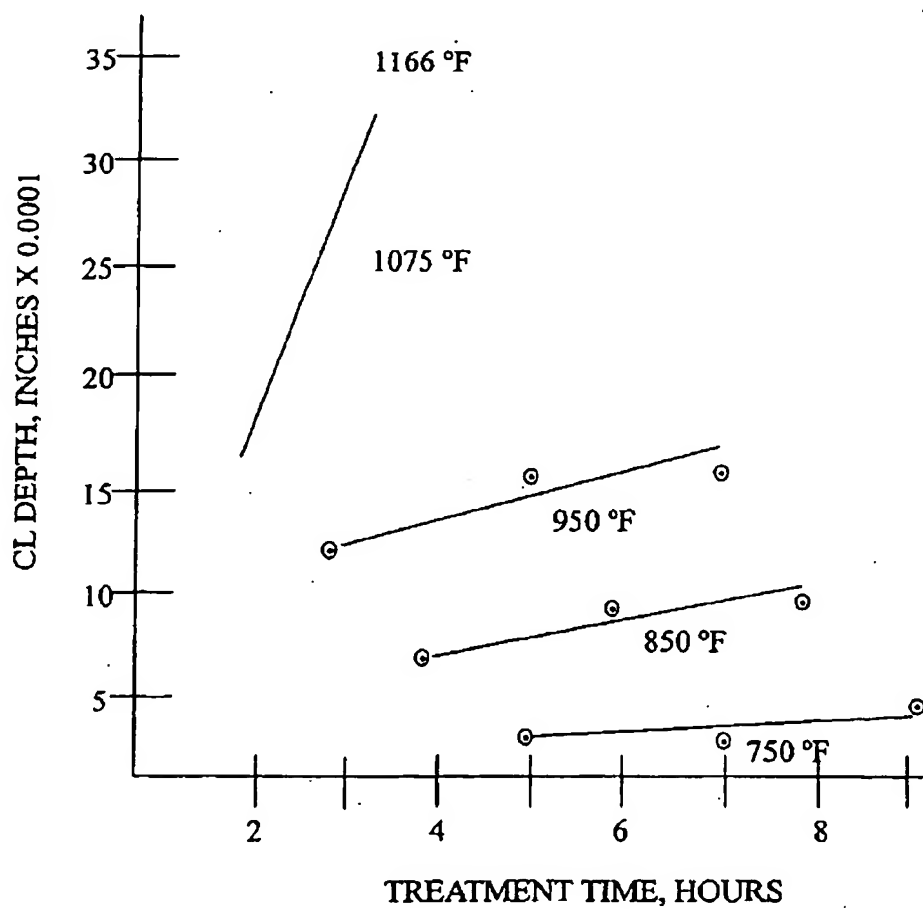
Fig 3

U.S. Patent

Jun. 8, 2004

Sheet 4 of 5

6,746,546 B2



DIFFUSION 416 STAINLESS STEEL

Fig 4

U.S. Patent

Jun. 8, 2004

Sheet 5 of 5

6,746,546 B2

INFLUENCE OF SBM TEMPERATURE ON
CORE HARDNESS OF PRE HARDENED
AND TEMPERED 41655

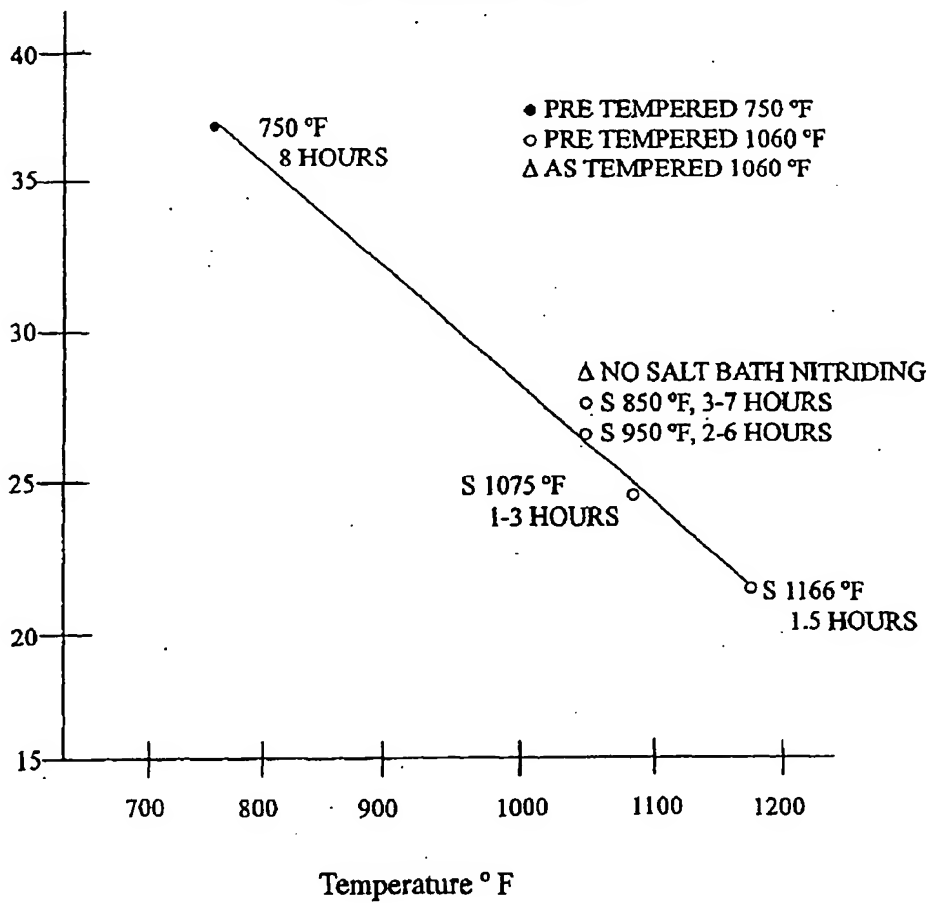


Fig 5

TO: MW On (note date): 12/29/04 Pat. No. 6 146 546 B2
Team Leaders Initials
INFO SUPPLIED BY: TPS 10/1002-282
OAC/LDRC Initials

SECOND REQUEST (DIFFERENT CORRECTIONS), SUPERSEDE OR RECONSIDERATION
(OAC OR LDRC, USE A RED PEN FOR COMPLETING INFO, ON THIS COVER SHEET) (11/2002 cbn)

Team Leader, an Office Automation Clerk may assist you by supplying data from CofC Database (Current & History), PALM, and copies from Intranet, to determine type of request (second request, supersede, and/or reconsideration) and to determine if there were any errors made in decisions and/or publishing are attributable. Team Leader, check appropriate boxes below, key record (if necessary) and forward to JCWS, to order file and assign file to an LIE, to EXPEDITE.

Team Leader, DO NOT ORDER FILE.

MRD (for request attached to this cover sheet): 12/10/2004 (Team Leader have LDRC, stamp same MRD on 1050s.)

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Information re most recent record in CofC database (Check Current & History)

MRD: 07 / 22 / 2004 Examiner (LIE's initials): RT

Date Assigned: 10 / 31 / 2004 Turned In: 10 / 31 / 2004

CofC Issued: 11/23/2004 CofC Denied: / / Updated: Y / N Date: / /

Patent number listed on C of C listing in OG ((circle one) Y / N)

CofC Issued for this record is attached to patent on Internet ((circle one) Y / N)

New/different correction(s) requested. Check Intranet or with RTIS. ((circle one) Y / N)

☐ Duplicate (same heading and corrections published/issued CofC on Intranet. ((circle one) Y / N)

☐ Substitute or corrected request. Locate the original request (check with JCWS and RTIS).

☐ Second Request (another) requesting new/different corrections or additional corrections. **TEAM LEADER, DO NOT ORDER FILE.** If necessary, call attorney/applicant for assistance in determining if new/different corrections. Team Leader, key new a record on: / /. Place and count with

CofCs keyed, same week, determine and note in to upper right hand corner if "P", "R", or "RTC".

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☐ LIE: _____
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1,323 Consideration
or Petition Required

If errors are attributable to LIE, use guidelines for appropriately notifying the LIE and recording errors (make copies supporting that the LIE made error, attach copies to this cover sheet, keeping copies for your records, and forward copies to CBN, at the end of each month).

☐ JW or OL, locate request for CofC published on: / / and return to: _____

(Circle OAC Initials)

☒ Team Leader keyed record on on: 1-21-05 ☐ Post card Printed by Tasneem
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Comments/ Instructions: _____

☐ SEE REVERSE SIDE, FOR ADDITIONAL COMMENTS/INSTRUCTIONS)

(Revised 12/15/2003 cbn) #4